the ultrastructure of the retinal rods.[12] There he further developed his abilities in electron microscopy. After returning to Sweden in 1948, Sjöstrand secured an appointment as permanent Docent in the Department of Anatomy at the Karolinska Institute, a position with limited teaching obligations that permitted him to devote most of his time to research. He set out to establish a laboratory for what he called *ultrastructure research* and in 1949 secured funding from the Alice and Kurt Wallenberg Foundation for an electron microscope (RCA EMU 2C). In the context of an application to the Rockefeller Foundation for additional equipment, he identified three components of his continuing research: the "structural basis of irritability" in sensory cells (the project Sjöstrand began at MIT), thin sectioning, and fixing cells for electron microscopy. The principal specimens for this work were the rods and cones of the guinea pig, especially a thin membrane which he thought was the primary part of the cell that was stimulated by light.

In 1949, as part of a trip to the Electron Microscope Society of America meetings in Washington, Sjöstrand visited the Rockefeller laboratory for a month and had access there to Claude's new microtome. Upon his return to Sweden, he developed his own microtome, one that employed an eccentrically located tissue mount revolving sixty times per minute that was advanced by a thermally expanding column behind the eccentric wheel. With this microtome, Sjöstrand claimed to be able to cut sections as thin as 70 Å on a regular basis. According to Porter,[13] Sjöstrand returned to Rockefeller for a month in 1952, where he learned of Palade's new buffered osmium fixative.

[12] Schmitt's impressions of Sjöstrand based on that year, reported in a letter to Gerald Pomerat of the Rockefeller Foundation on 26 July 1950, were certainly mixed. Schmitt said,

> I think there is little doubt that he is competent in [electron microscope research]. He is rather slow and sometimes appears phlegmatic, but this is probably illusory for he acquits himself well in discussions or debates, especially when his own work is in question.
>
> I am not sure that Sjöstrand himself will make any brilliant advances, but I do hope that his laboratory will become an active center for tissue fine structure work. Sjöstrand is well grounded in the field and will doubtless make substantial contributions, but I think his leadership among younger students of anatomy may pay even greater dividends. (Folder 1947, 1949–51, Box Karolinska Institutet, Molecular Biology, Series 800D, RG 2, Rockefeller Foundation Archives, RAC.)

Two years later Schmitt was more positive in his assessment of Sjöstrand's work at MIT. In a letter of 25 November 1952 to Ture Petrén, head of the Anatomy Institute in which Sjöstrand's laboratory was housed, Schmitt said, "I found that he is a sound scientist with the patience necessary to develop the complicated techniques required for the successful application of electron microscopy to the study of cell structure" (folder 1952–6, Box Karolinska Institutet, Molecular Biology, Series 800D, RG 2, Rockefeller Foundation Archives, RAC).

[13] Interview with Keith Porter, 1987, University of Maryland, Baltimore County. According to Porter, Sjöstrand also induced Porter's technician to return to Sweden with him, although she later returned to resume work with Porter.